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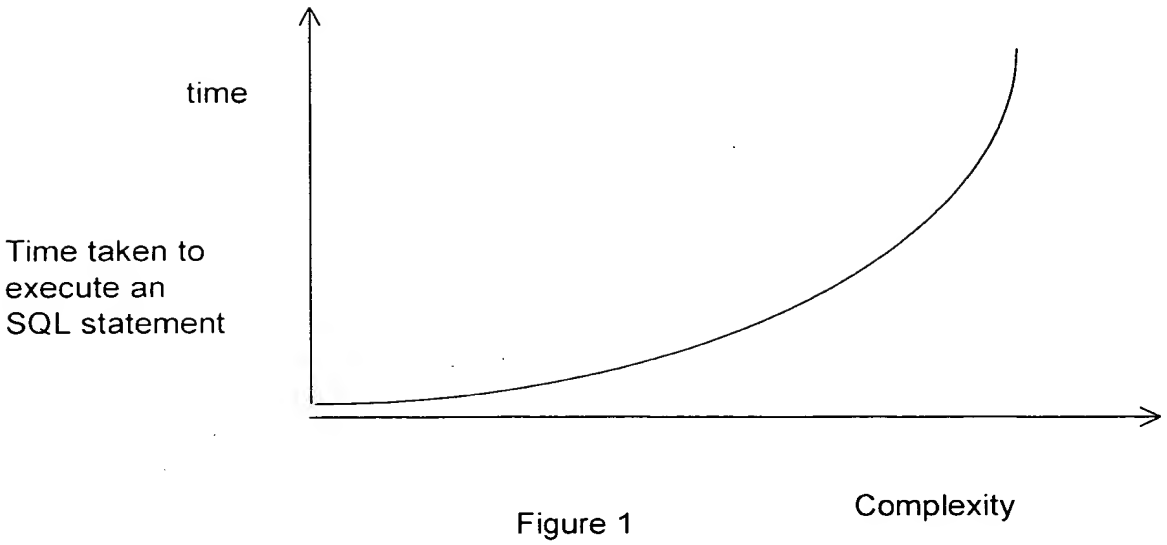

Figure 1

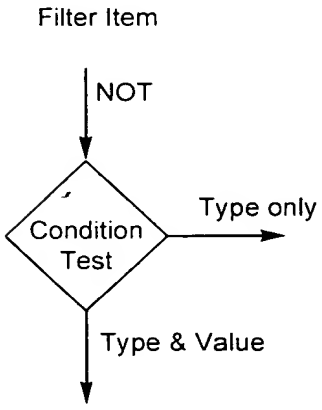

Figure 2

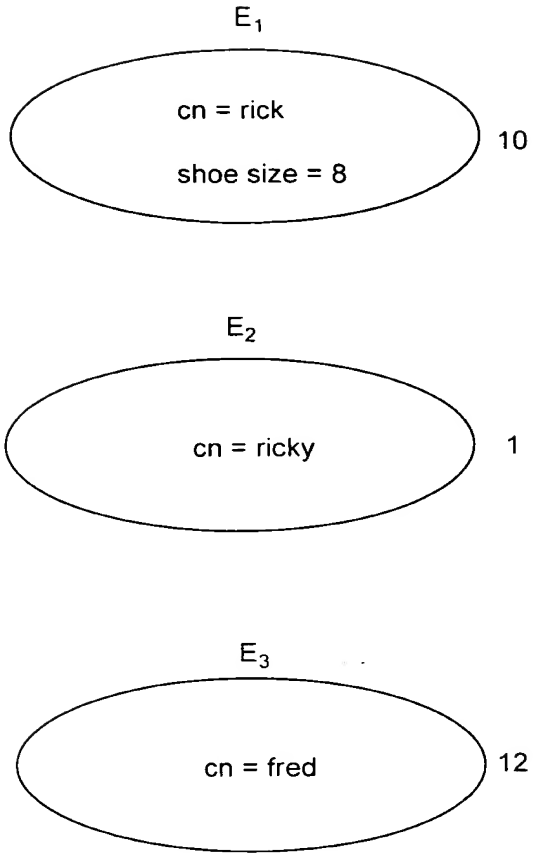

Figure 3

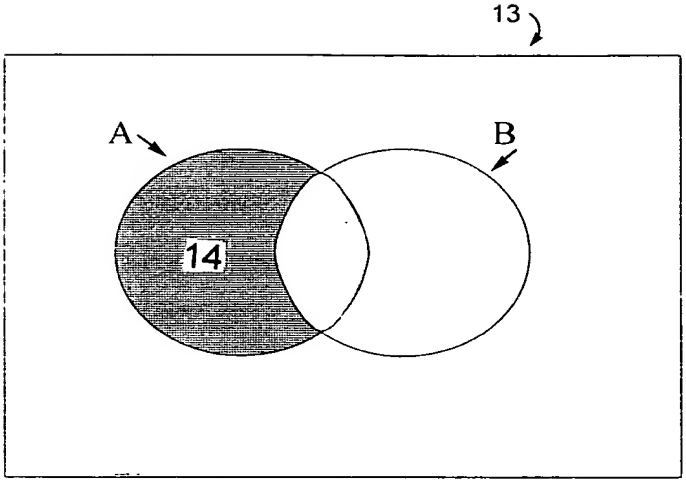

Figure 4

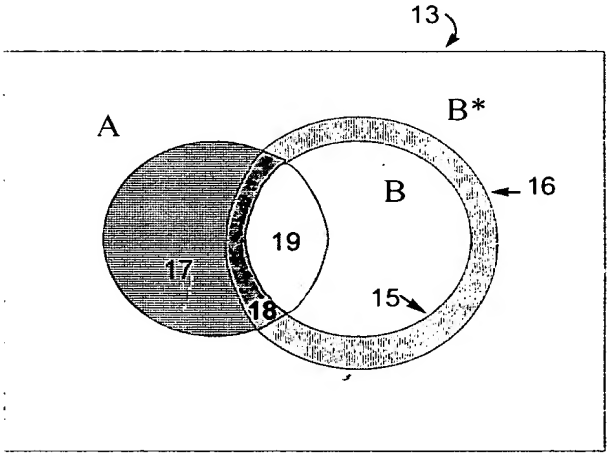

Figure 5

EP 2 244 043 A1

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SQL Query Buffers

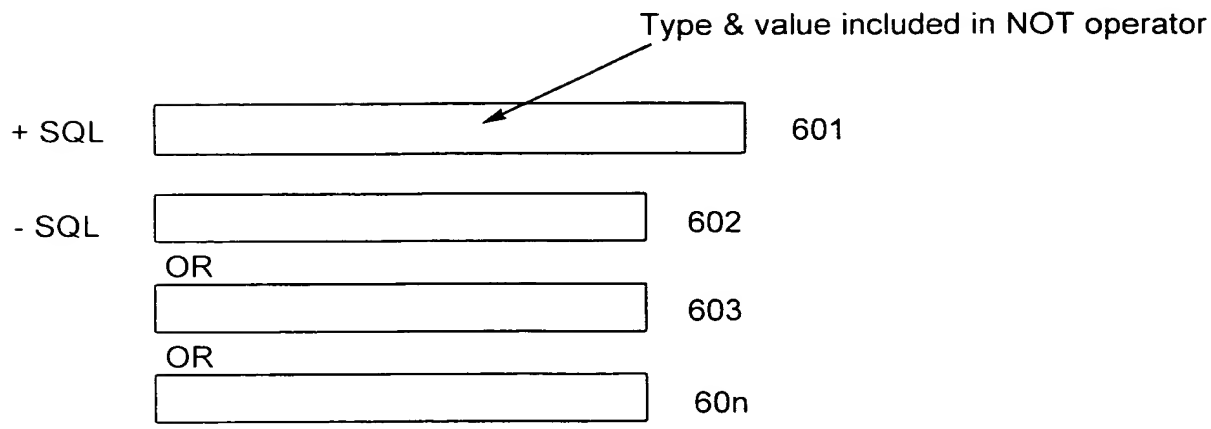

Figure 6

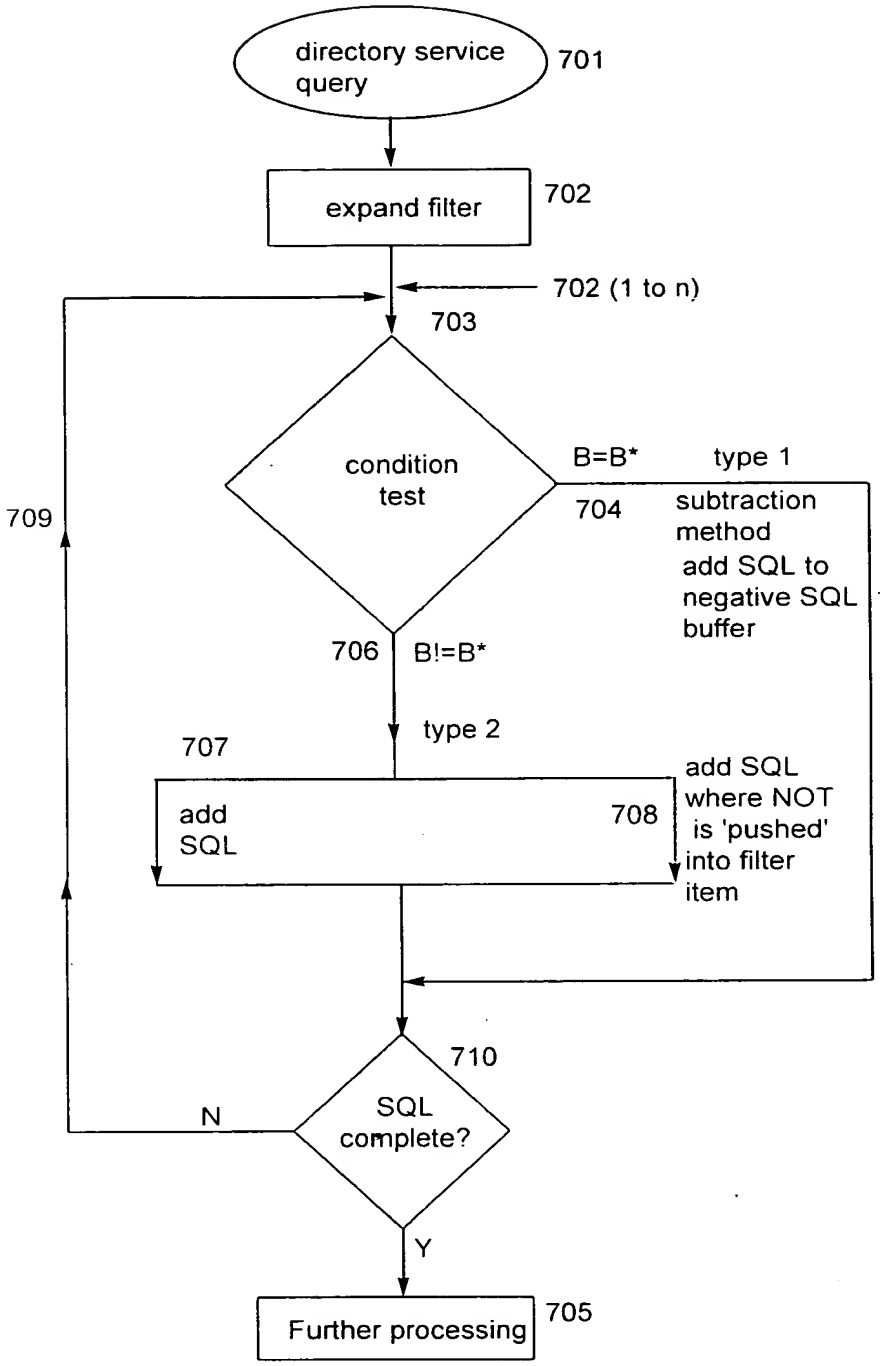
directory service query
701
expand filter
702
702 (1 to n)
703
condition test
B=B*
type 1
704
subtraction method
add SQL to negative SQL buffer
709
706
B!=B*
type 2
707
add SQL
708
add SQL where NOT is 'pushed' into filter item
710
SQL complete?
N
Y
Further processing
705

Figure 7

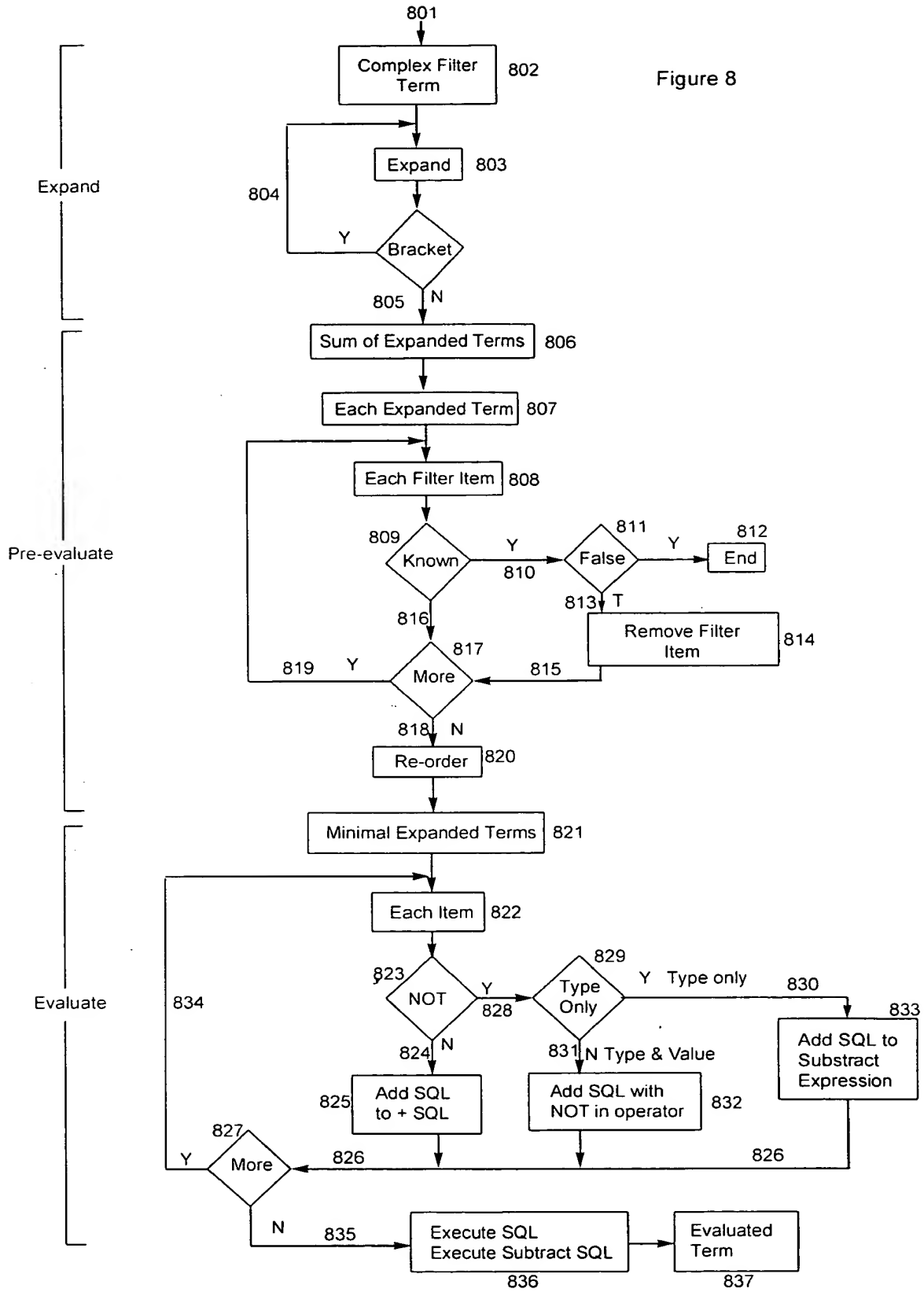
801
Complex Filter Term
802
Expand
803
804
Y
Bracket
805
N
Sum of Expanded Terms
806
Each Expanded Term
807
Each Filter Item
808
809
Known
Y
810
811
False
Y
812
End
813
T
Remove Filter Item
814
816
817
More
819
Y
815
818
N
Re-order
820
Minimal Expanded Terms
821
Each Item
822
823
NOT
Y
828
829
Type Only
Y
Type only
830
833
Add SQL to Substract Expression
824
N
831
N Type & Value
825
Add SQL to + SQL
Add SQL with NOT in operator
832
827
More
Y
826
826
834
N
835
Execute SQL
Execute Subtract SQL
836
Evaluated Term
837
Expand
Pre-evaluate
Evaluate

Figure 8

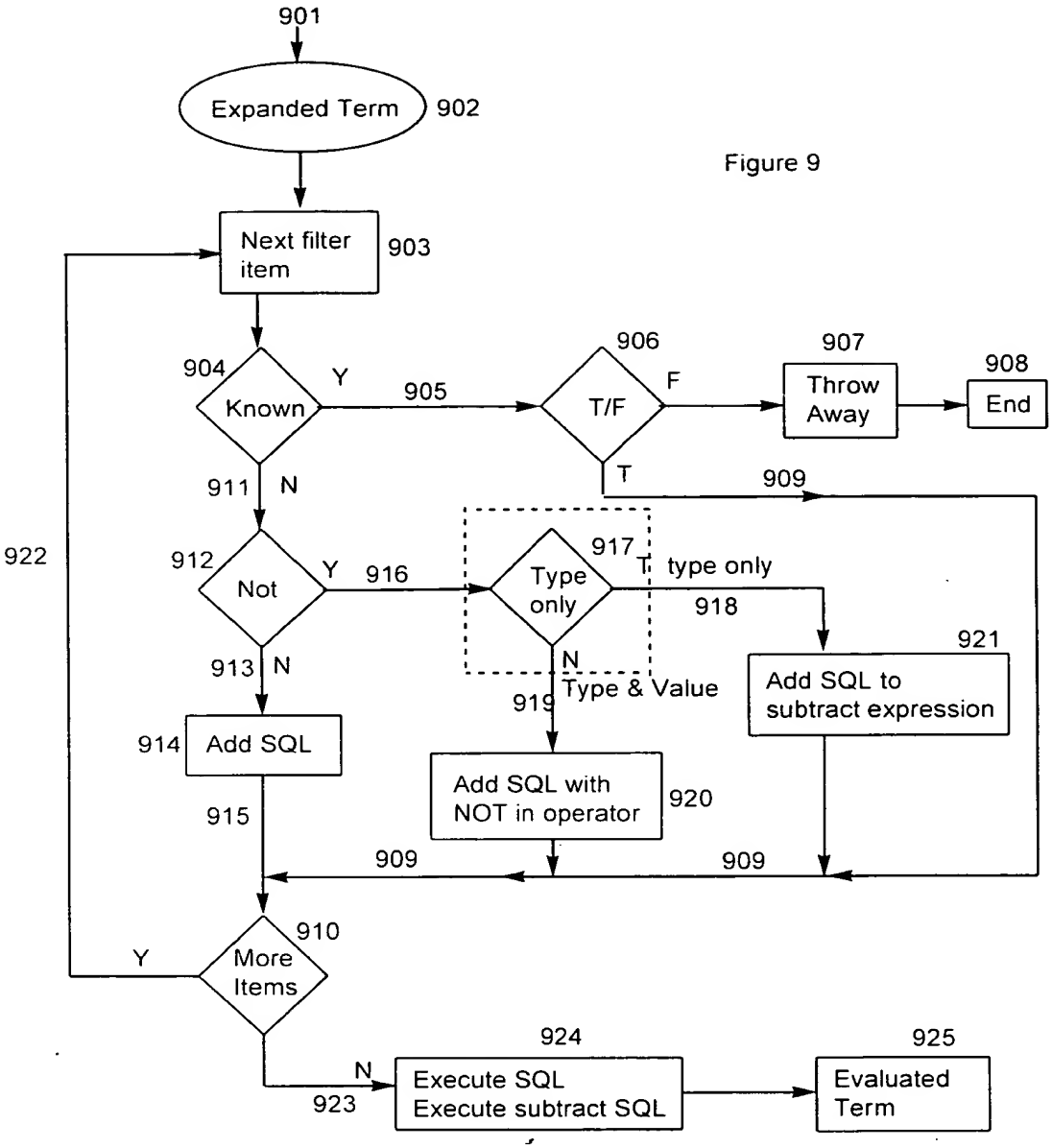
901
Expanded Term
902
Next filter item
903
904
Known
Y
905
906
T/F
F
907
Throw Away
908
End
T
909
911
N
912
Not
Y
916
917
Type only
T
type only
918
921
Add SQL to subtract expression
913
N
N
Type & Value
919
914
Add SQL
Add SQL with NOT in operator
920
915
909
909
922
910
More Items
Y
924
925
N
923
Execute SQL
Execute subtract SQL
Evaluated Term

Figure 9